WHAT IS CLAIMED IS:
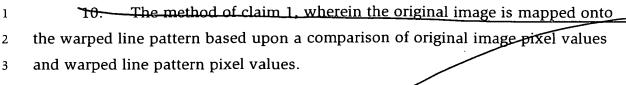
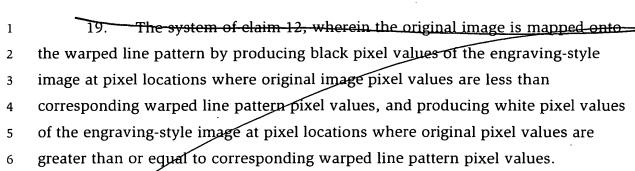1. ~~An image processing method, comprising:~~
   warping an initial line pattern to produce a warped line pattern; and
   mapping an original image onto the warped line pattern to produce an
   engraving-style halftone image.

2. The method of claim 1, wherein the initial line pattern is warped
   based upon pixel values of the original image.

3. The method of claim 1, wherein the initial line pattern is oriented
   substantially along an initial direction and the initial line pattern is warped in a
   direction substantially orthogonal to the initial direction.

4. The method of claim 1, wherein the initial line pattern is warped
   based upon a density map extracted from pixel values of the original image.

5. The method of claim 4, further comprising producing a density map
   by sampling pixel values of the original image.

6. The method of claim 1, wherein the initial line pattern is warped
   based upon gradient information computed from pixel values of the original
   image.

7. The method of claim 6, further comprising computing gradient
   information for a pixel location based upon a weighted averaging of gradient
   information computed from neighboring pixel values.

8. The method of claim 1, wherein the initial line pattern is warped
   based upon a set of displacement values computed for pixel locations along each
   line of the initial line pattern.

9. The method of claim 1, wherein the initial line pattern is warped by
   inserting or removing one or more lines between adjacent lines of the initial line
   pattern.

1 ~~10.   The method of claim 1, wherein the original image is mapped onto~~
2 ~~the warped line pattern based upon a comparison of original image pixel values~~
3 ~~and warped line pattern pixel values.~~

1   11.   The method of claim 10, wherein the original image is mapped onto
2 the warped line pattern by producing black pixel values of the engraving-style
3 image at pixel locations where original image pixel values are less than
4 corresponding warped line pattern pixel values, and producing white pixel values
5 of the engraving-style image at pixel locations where original pixel values are
6 greater than or equal to corresponding warped line pattern pixel values.

1   12.   An image processing system, comprising a processor programmed to
2 warp an initial line pattern to produce a warped line pattern, and to map an
3 original image onto the warped line pattern to produce an engraving-style
4 halftone image.

1   13.   The system of claim 12, wherein the initial line pattern is warped
2 based upon a density map extracted from pixel values of the original image.

1   14.   The system of claim 13, wherein the processor is programmed to
2 produce a density map by sampling pixel values of the original image.

1   15.   The system of claim 12, wherein the initial line pattern is warped
2 based upon gradient information computed from pixel values of the original
3 image.

1   16.   The system of claim 15, wherein the processor is programmed to
2 compute gradient information for a pixel location based upon a weighted
3 averaging of gradient information computed from neighboring pixel values.

1   17.   The system of claim 12, wherein the initial line pattern is warped
2 based upon a set of displacement values computed for pixel locations along each
3 line of the initial line pattern.

1   18.   The system of claim 12, wherein the initial line pattern is warped by
2 inserting or removing one or more lines between adjacent lines of the initial line
3 pattern.

12

1   ~~19.   The system of claim 12, wherein the original image is mapped onto~~
2   the warped line pattern by producing black pixel values of the engraving-style
3   image at pixel locations where original image pixel values are less than
4   corresponding warped line pattern pixel values, and producing white pixel values
5   of the engraving-style image at pixel locations where original pixel values are
6   greater than or equal to corresponding warped line pattern pixel values.

1   20.   A computer-readable medium carrying instructions for:
2   warping an initial line pattern to produce a warped line pattern; and
3   mapping an original image onto the warped line pattern to produce an
4   ~~engraving-style halftone image.~~

13